1644 1600 Ft 30

Serial Number: 09/189,702A   ENTERED

CRF Processing Date: 12/30/2002
Edited by: _____
Verified by: _____ (STIC staff)

☐ Changed a file from non-ASCII to ASCII

☐ Changed the margins in cases where the sequence text was "wrapped" down to the next line.

☐ Edited a format error in the Current Application Data section, specifically:
_____

☐ Edited the Current Application Data section with the actual current number. The number inputted by the applicant was ☐ the prior application data; or ☐ other _____.

☐ Added the mandatory heading and subheadings for "Current Application Data".

☐ Edited the "Number of Sequences" field. The applicant spelled out a number instead of using an integer.

☐ Changed the spelling of a mandatory field (the headings or subheadings), specifically:
_____

☐ Corrected the SEQ ID NO when obviously incorrect. The sequence numbers that were edited were:
_____

☐ Inserted or corrected a nucleic number at the end of a nucleic line. SEQ ID NO's edited:
_____

☐ Corrected subheading placement. All responses must be on the same line as each subheading. If the applicant placed a response below the subheading, this was moved to its appropriate place.

☐ Inserted colons after headings/subheadings. Headings edited included:
_____

☐ Deleted extra, invalid, headings used by an applicant, specifically:
_____

☐ Deleted: ☐ non-ASCII "garbage" at the beginning/end of files; ☐ secretary initials/filename at end of file; ☐ page numbers throughout text; ☐ other invalid text, such as_____ .

☐ Inserted mandatory headings, specifically: _____

☐ Corrected an obvious error in the response, specifically:
_____

☐ Edited identifiers where upper case is used but lower case is required, or vice versa.

RECEIVED

☐ Corrected an error in the Number of Sequences field, specifically:
_____

JAN 0 2 2003

☐ A "Hard Page Break" code was inserted by the applicant. All occurrences had to be deleted. TECH CENTER 1600/2900

☐ Deleted *ending* stop codon in amino acid sequences and adjusted the "(A)Length:" field accordingly (error due to a Patentin bug). Sequences corrected: _____

☑ Other: Corrected amino acid numbering
_____
_____
_____

*Examiner: The above corrections must be communicated to the applicant in the first Office Action. DO NOT send a copy of this form.

3/1/95

```
 3 <110> APPLICANT: Sette, Alessandro
 4        Sidney, John
 5        Kast, W. Martin
 6        Southwood, Scott
 7        Epimmune, Inc.
 9 <120> TITLE OF INVENTION: HLA Binding Peptides and Their Uses
11 <130> FILE REFERENCE: 39963-20019.20
13 <140> CURRENT APPLICATION NUMBER: US 09/189,702A
14 <141> CURRENT FILING DATE: 1998-11-10
16 <150> PRIOR APPLICATION NUMBER: US 08/205,713
17 <151> PRIOR FILING DATE: 1994-03-04
19 <160> NUMBER OF SEQ ID NOS: 380
20 <170> SOFTWARE: FastSEQ for Windows Version 3.0
22 <210> SEQ ID NO: 1
23 <211> LENGTH: 9
24 <212> TYPE: PRT
25 <213> ORGANISM: Artificial Sequence
27 <220> FEATURE:
28 <223> OTHER INFORMATION: Flu.24 peptide 17.0317
30 <400> SEQUENCE: 1
31  Leu Gln Ile Gly Asn Ile Ile Ser Ile
32   1               5
34 <210> SEQ ID NO: 2
35 <211> LENGTH: 9
36 <212> TYPE: PRT
37 <213> ORGANISM: Artificial Sequence
39 <220> FEATURE:
40 <223> OTHER INFORMATION: CEA.432 peptide 38.0103
42 <400> SEQUENCE: 2
43  Asn Leu Ser Leu Ser Cys His Ala Ala
44   1               5
46 <210> SEQ ID NO: 3
47 <211> LENGTH: 9
48 <212> TYPE: PRT
49 <213> ORGANISM: Artificial Sequence
51 <220> FEATURE:
52 <223> OTHER INFORMATION: CEA.605V9 peptide 1233.11
54 <400> SEQUENCE: 3
55  Tyr Leu Ser Gly Ala Asn Leu Asn Val
56   1               5
57 <210> SEQ ID NO: 4
58 <211> LENGTH: 9
59 <212> TYPE: PRT
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RAW SEQUENCE LISTING   DATE: 12/30/2002
PATENT APPLICATION: **US/09/189,702A**   TIME: 19:09:43

Input Set : **N:\AMC\6497882.txt**
Output Set: **N:\CRF4\12302002\I189702A.raw**

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60 <213> ORGANISM: Artificial Sequence
62 <220> FEATURE:
63 <223> OTHER INFORMATION: p53.149M2 peptide 1295.03
65 <400> SEQUENCE: 4
66  Ser Met Pro Pro Pro Gly Thr Arg Val
67   1               5
69 <210> SEQ ID NO: 5
70 <211> LENGTH: 9
71 <212> TYPE: PRT
72 <213> ORGANISM: Artificial Sequence
74 <220> FEATURE:
75 <223> OTHER INFORMATION: p53.149L2 peptide 1295.04
77 <400> SEQUENCE: 5
78  Ser Leu Pro Pro Pro Gly Thr Arg Val
79   1               5
81 <210> SEQ ID NO: 6
82 <211> LENGTH: 9
83 <212> TYPE: PRT
84 <213> ORGANISM: Artificial Sequence
86 <220> FEATURE:
87 <223> OTHER INFORMATION: p53.139 peptide 1317.24
89 <400> SEQUENCE: 6
90  Lys Thr Cys Pro Val Gln Leu Trp Val
91   1               5
93 <210> SEQ ID NO: 7
94 <211> LENGTH: 9
95 <212> TYPE: PRT
96 <213> ORGANISM: Artificial Sequence
98 <220> FEATURE:
99 <223> OTHER INFORMATION: p53.24V9 peptide 1323.02
101 <400> SEQUENCE: 7
102  Lys Leu Leu Pro Glu Asn Asn Val Val
103   1                5
105 <210> SEQ ID NO: 8
106 <211> LENGTH: 9
107 <212> TYPE: PRT
108 <213> ORGANISM: Artificial Sequence
110 <220> FEATURE:
111 <223> OTHER INFORMATION: p53.129B7V9 peptide 1323.04
113 <400> SEQUENCE: 8
114  Ala Leu Asn Lys Met Phe Asx Gln Val
115   1               5
118 <210> SEQ ID NO: 9
119 <211> LENGTH: 9
120 <212> TYPE: PRT
121 <213> ORGANISM: Artificial Sequence
123 <220> FEATURE:
124 <223> OTHER INFORMATION: p53.139L2B3 peptide 1323.06
126 <400> SEQUENCE: 9
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                RAW SEQUENCE LISTING          DATE: 12/30/2002
                PATENT APPLICATION:  US/09/189,702A    TIME: 19:09:43

                Input Set : N:\AMC\6497882.txt
                Output Set: N:\CRF4\12302002\I189702A.raw

  127  Lys Leu Asx Pro Val Gln Leu Trp Val
  128   1              5
  130 <210> SEQ ID NO: 10
  131 <211> LENGTH: 9
  132 <212> TYPE: PRT
  133 <213> ORGANISM: Artificial Sequence
  135 <220> FEATURE:
  136 <223> OTHER INFORMATION: p53.229B1L2V9 peptide 1323.08
  138 <400> SEQUENCE: 10
  139  Asx Leu Thr Ile His Tyr Asn Tyr Val
  140   1              5
  142 <210> SEQ ID NO: 11
  143 <211> LENGTH: 10
  144 <212> TYPE: PRT
  145 <213> ORGANISM: Artificial Sequence
  147 <220> FEATURE:
  148 <223> OTHER INFORMATION: p53.188L2 peptide 1323.18
  150 <400> SEQUENCE: 11
  151  Leu Leu Pro Pro Gln His Leu Ile Arg Val
  152   1              5                10
  154 <210> SEQ ID NO: 12
  155 <211> LENGTH: 11
  156 <212> TYPE: PRT
  157 <213> ORGANISM: Artificial Sequence
  159 <220> FEATURE:
  160 <223> OTHER INFORMATION: p53.236 peptide 1323.29
  162 <400> SEQUENCE: 12
  163  Tyr Met Cys Asn Ser Ser Cys Met Gly Gly Met
  164   1              5                10
  166 <210> SEQ ID NO: 13
  167 <211> LENGTH: 11
  168 <212> TYPE: PRT
  169 <213> ORGANISM: Artificial Sequence
  171 <220> FEATURE:
  172 <223> OTHER INFORMATION: p53.236L2V11 peptide 1323.31
  174 <400> SEQUENCE: 13
  175  Tyr Leu Cys Asn Ser Ser Cys Met Gly Gly Val
  176   1              5                10
  178 <210> SEQ ID NO: 14
  179 <211> LENGTH: 11
  180 <212> TYPE: PRT
  181 <213> ORGANISM: Artificial Sequence
  183 <220> FEATURE:
  184 <223> OTHER INFORMATION: p53.101L2V11 peptide 1323.34
  186 <400> SEQUENCE: 14
  187  Lys Leu Tyr Gln Gly Ser Tyr Gly Phe Arg Val
  188   1              5                10
  190 <210> SEQ ID NO: 15
  191 <211> LENGTH: 9
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192 <212> TYPE: PRT
193 <213> ORGANISM: Artificial Sequence
195 <220> FEATURE:
196 <223> OTHER INFORMATION: p53.135 peptide 1324.07
198 <400> SEQUENCE: 15
199  Cys Gln Leu Ala Lys Thr Cys Pro Val
200    1               5
202 <210> SEQ ID NO: 16
203 <211> LENGTH: 9
204 <212> TYPE: PRT
205 <213> ORGANISM: Artificial Sequence
207 <220> FEATURE:
208 <223> OTHER INFORMATION: p53.65L2 peptide 1325.01
210 <400> SEQUENCE: 16
211  Arg Leu Pro Glu Ala Ala Pro Pro Val
212    1               5
214 <210> SEQ ID NO: 17
215 <211> LENGTH: 9
216 <212> TYPE: PRT
217 <213> ORGANISM: Artificial Sequence
219 <220> FEATURE:
220 <223> OTHER INFORMATION: p53.187V9 peptide 1325.02
222 <400> SEQUENCE: 17
223  Gly Leu Ala Pro Pro Gln His Leu Val
224    1               5
226 <210> SEQ ID NO: 18
227 <211> LENGTH: 9
228 <212> TYPE: PRT
229 <213> ORGANISM: Artificial Sequence
231 <220> FEATURE:
232 <223> OTHER INFORMATION: MAGE3.112M2 peptide 1325.04
234 <400> SEQUENCE: 18
235  Lys Met Ala Glu Leu Val His Phe Leu
236    1               5
238 <210> SEQ ID NO: 19
239 <211> LENGTH: 9
240 <212> TYPE: PRT
241 <213> ORGANISM: Artificial Sequence
243 <220> FEATURE:
244 <223> OTHER INFORMATION: MAGE3.112L2 peptide 1325.05
246 <400> SEQUENCE: 19
247  Lys Leu Ala Glu Leu Val His Phe Leu
248    1               5
250 <210> SEQ ID NO: 20
251 <211> LENGTH: 9
252 <212> TYPE: PRT
253 <213> ORGANISM: Artificial Sequence
255 <220> FEATURE:
256 <223> OTHER INFORMATION: p53.135L2 peptide 1326.01
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```
258 <400> SEQUENCE: 20
259  Cys Leu Leu Ala Lys Thr Cys Pro Val
260   1               5
262 <210> SEQ ID NO: 21
263 <211> LENGTH: 9
264 <212> TYPE: PRT
265 <213> ORGANISM: Artificial Sequence
267 <220> FEATURE:
268 <223> OTHER INFORMATION: p53.164L2 peptide 1326.02
270 <400> SEQUENCE: 21
271  Lys Leu Ser Gln His Met Thr Glu Val
272   1               5
274 <210> SEQ ID NO: 22
275 <211> LENGTH: 9
276 <212> TYPE: PRT
277 <213> ORGANISM: Artificial Sequence
279 <220> FEATURE:
280 <223> OTHER INFORMATION: p53.68L2V9 peptide 1326.04
282 <400> SEQUENCE: 22
283  Glu Leu Ala Pro Val Val Ala Pro Val
284   1               5
286 <210> SEQ ID NO: 23
287 <211> LENGTH: 10
288 <212> TYPE: PRT
289 <213> ORGANISM: Artificial Sequence
291 <220> FEATURE:
292 <223> OTHER INFORMATION: p53.136 peptide 1326.06
294 <400> SEQUENCE: 23
295  Gln Leu Ala Lys Thr Cys Pro Val Gln Val
296   1               5                   10
298 <210> SEQ ID NO: 24
299 <211> LENGTH: 9
300 <212> TYPE: PRT
301 <213> ORGANISM: Artificial Sequence
303 <220> FEATURE:
304 <223> OTHER INFORMATION: p53.168L2 peptide 1326.08
306 <400> SEQUENCE: 24
307  His Leu Thr Glu Val Val Arg Arg Val
308   1               5
310 <210> SEQ ID NO: 25
311 <211> LENGTH: 11
312 <212> TYPE: PRT
313 <213> ORGANISM: Artificial Sequence
315 <220> FEATURE:
316 <223> OTHER INFORMATION: peptide 1329.01
318 <400> SEQUENCE: 25
319  Lys Thr Tyr Gln Gly Ser Tyr Gly Phe Arg Leu
320   1               5                   10
322 <210> SEQ ID NO: 26
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RAW SEQUENCE LISTING ERROR SUMMARY   DATE: 12/30/2002
PATENT APPLICATION: US/09/189,702A   TIME: 19:09:44

Input Set : N:\AMC\6497882.txt
Output Set: N:\CRF4\12302002\I189702A.raw

Please Note:
Use of n and/or Xaa have been detected in the Sequence Listing. Please review the
Sequence Listing to ensure that a corresponding explanation is presented in the <220>
to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:194; Xaa Pos. 2
Seq#:195; Xaa Pos. 6
Seq#:196; Xaa Pos. 2
Seq#:197; Xaa Pos. 8
Seq#:218; Xaa Pos. 1,2,3,5,6,8
Seq#:378; Xaa Pos. 1,2,3,4,5,6,8
Seq#:379; Xaa Pos. 1,2,3,4,5,6,7
Seq#:380; Xaa Pos. 1,3,4,5,7,8,9,10

/6 00

```
                    RAW SEQUENCE LISTING              DATE: 12/26/2002
                    PATENT APPLICATION:  US/09/189,702A   TIME: 13:13:23

                    Input Set : D:\39963-20019.txt
                    Output Set: N:\CRF4\12262002\I189702A.raw

      3 <110> APPLICANT: Sette, Alessandro
      4        Sidney, John
      5        Kast, W. Martin
      6        Southwood, Scott
      7        Epimmune, Inc.
      9 <120> TITLE OF INVENTION: HLA Binding Peptides and Their Uses
     11 <130> FILE REFERENCE: 39963-20019.20
     13 <140> CURRENT APPLICATION NUMBER: US 09/189,702A
C--> 14 <141> CURRENT FILING DATE: 2002-12-26  1998-11-10
     16 <150> PRIOR APPLICATION NUMBER: US 08/205,713
     17 <151> PRIOR FILING DATE: 1994-03-04
     19 <160> NUMBER OF SEQ ID NOS: 380                      Does Not Comply
     20 <170> SOFTWARE: FastSEQ for Windows Version 3.0   Corrected Diskette Needed
                                                               do edit

ERRORED SEQUENCES

   2643 <210> SEQ ID NO: 218
   2644 <211> LENGTH: 10
   2645 <212> TYPE: PRT
   2646 <213> ORGANISM: Artificial Sequence
   2648 <220> FEATURE:
   2649 <223> OTHER INFORMATION: HLA-A1 allele-specific motif
   2651 <220> FEATURE:
   2652 <221> NAME/KEY: VARIANT
   2653 <222> LOCATION: (1)...(10)
   2654 <223> OTHER INFORMATION: Xaa at location 1 is any amino acid;
   2655        Xaa at location 2 is S or T;
   2656        Xaa at location 3 is D or E;
   2657        Xaa at location 5 is any amino acid;
W--> 2658 <220> FEATURE:
   2659 <223> OTHER INFORMATION: Xaa at location 6 is any amino acid;
   2660        Xaa at location 8 is any amino acid
   2663 <400> SEQUENCE: 218
W--> 2664 Xaa Xaa Xaa Pro Xaa Xaa Leu Xaa Tyr Lys
E--> 2665 1     5          10   misaligned amino acid nos.
   4576 <210> SEQ ID NO: 378
   4577 <211> LENGTH: 10
   4578 <212> TYPE: PRT
   4579 <213> ORGANISM: Artificial Sequence
   4581 <220> FEATURE:
   4582 <223> OTHER INFORMATION: HLA-A3,2 allele-specific motif
   4584 <220> FEATURE:
```

```
4585 <221> NAME/KEY: VARIANT
4586 <222> LOCATION: (1)...(10)
4587 <223> OTHER INFORMATION: Xaa at location 1 is any amino acid;
4588       Xaa at location 2 is V, L, or M;
4589       Xaa at location 3 is Y or D;
4590       Xaa at location 4 is any amino acid;
W--> 4591 <220> FEATURE:
4592 <223> OTHER INFORMATION: Xaa at location 5 is any amino acid;
4593       Xaa at location 6 is any amino acid;
4594       Xaa at location 8 is Q or N
4596 <400> SEQUENCE: 378
W--> 4597 Xaa Xaa Xaa Xaa Xaa Xaa Ile Xaa Lys Lys
E--> 4598  1            5            10

4601 <210> SEQ ID NO: 379
4602 <211> LENGTH: 10
4603 <212> TYPE: PRT
4604 <213> ORGANISM: Artificial Sequence
4606 <220> FEATURE:
4607 <223> OTHER INFORMATION: HLA-A11 allele-specific motif
4609 <220> FEATURE:
4610 <221> NAME/KEY: VARIANT
4611 <222> LOCATION: (1)...(10)
4612 <223> OTHER INFORMATION: Xaa at location 1 is any amino acid;
4613       Xaa at location 2 is T or V;
4614       Xaa at location 3 is M or F;
4615       Xaa at location 4 is any amino acid;
W--> 4616 <220> FEATURE:
4617 <223> OTHER INFORMATION: Xaa at location 5 is any amino acid;
4618       Xaa at location 6 is any amino acid;
4619       Xaa at location 7 is any amino acid
4621 <400> SEQUENCE: 379
W--> 4622 Xaa Xaa Xaa Xaa Xaa Xaa Xaa Gln Lys Lys
E--> 4623  1            5            10

4625 <210> SEQ ID NO: 380
4626 <211> LENGTH: 10
4627 <212> TYPE: PRT
4628 <213> ORGANISM: Artificial Sequence
4630 <220> FEATURE:
4631 <223> OTHER INFORMATION: HLA-A24.1 allele-specific motif
4633 <220> FEATURE:
4634 <221> NAME/KEY: VARIANT
4635 <222> LOCATION: (1)...(10)
4636 <223> OTHER INFORMATION: Xaa at location 1 is any amino acid;
4637       Xaa at location 3 is I or M;
4638       Xaa at location 4 is D, E, G K or P;
4639       Xaa at location 5 is L, M or N;
W--> 4640 <220> FEATURE:
4641 <223> OTHER INFORMATION: Xaa at location 7 is N or V;
4642       Xaa at location 8 is A, E, K, Q or S;
```

```
                    RAW SEQUENCE LISTING              DATE: 12/26/2002
                    PATENT APPLICATION:  US/09/189,702A    TIME: 13:13:23

                    Input Set : D:\39963-20019.txt
                    Output Set: N:\CRF4\12262002\I189702A.raw

    4643        Xaa at location 9 is F or L;
    4644        Xaa at location 10 is F or A
    4646 <400> SEQUENCE: 380
W--> 4647 Xaa Tyr Xaa Xaa Xaa Val Xaa Xaa Xaa Xaa
E--> 4648  1       5           10
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```
L:14 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:2347 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:2351 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:194
L:2352 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:194 after pos.:0
L:2363 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:2367 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:195
L:2368 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:195 after pos.:0
L:2379 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:2383 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:196
L:2384 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:196 after pos.:0
L:2395 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!
L:2399 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:197
L:2400 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:197 after pos.:0
L:2658 M:283 W: Missing Blank Line separator, <220> field identifier
L:2664 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:218 after pos.:0
L:2665 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:218
L:4591 M:283 W: Missing Blank Line separator, <220> field identifier
L:4597 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:378 after pos.:0
L:4598 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:378
L:4616 M:283 W: Missing Blank Line separator, <220> field identifier
L:4622 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:379 after pos.:0
L:4623 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:379
L:4640 M:283 W: Missing Blank Line separator, <220> field identifier
L:4647 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:380 after pos.:0
L:4648 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:380
```